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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,867

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT

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2855

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,867	<b>Applicant(s)</b> MONTEIRO ET AL.	
	<b>Examiner</b> OCTAVIA DAVIS	<b>Art Unit</b> 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/17/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/17/06</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Claim Objections*

1. Claims 1 – 3 are objected to because of the following informalities: In claim 1, line 6, *the platforms*, lacks antecedent basis, on line 7, *the arms*, lacks antecedent basis and on lines 8 and 9, *each gripping jaw* lacks antecedent basis. In claim 2, on line 1, *each arm* lacks antecedent basis. In claim 3, lines 2 and 3, *the geared motor* lacks antecedent basis. Appropriate corrections are required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 5 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Urumov titled “A Machine for testing sheet specimens for fatigue under two-frequency loading conditions”.

Regarding claims 1 and 5 - 7, Urumov discloses a machine comprising a central block 2, working as a supporting structure, and platforms 3, 4 stiffly or rigidly attached in a radial orientation, in which arms 7 are seated, designed to apply a required force and displacement to gripping jaws or grip members 6 where a test specimen 5 is attached, the multiaxial universal testing machine can be composed by a plurality of axes keeping all the capabilities needed to evaluate the mechanical behaviour and performance of materials with planar structures and the kind of assay and the test specimen shape must be associated to the number of activated axis and enclosing the test specimen

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5 inside the central area circumscribed by all the gripping jaws 6 and reserved to the placement of the test specimen, attaching the test specimen 5 to the gripping jaws 6 involved in the assay to perform, according to the desired orientation and applying force to the test specimen through the displacement of the gripping jaws and following the configuration parameters defined to the test performance (See Page 1, Paragraph 3, lines 1 – 13 and Page 2, Paragraph 1, lines 1 - 7).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uromov in view of Boehler et al titled “A new direct biaxial testing machine for anisotropic materials”.

Regarding claims 2 and 3, Uromov discloses all of the limitations of these claims except that each arm is made up of an electric motor with speed reducer, coupled to a screw type linear drive, in series with a load cell and a gripping jaw and the rotational movement of the geared motor is converted into linear displacement and force by the screw type linear drive, monitoring and controlling the parameters with a rotary encoder in the motor and a load cell, between the screw type linear drive and the gripping jaw. However, in, Boehler et al, the machine tester includes a plurality of rigid members supported on a frame that surrounds a test specimen, horizontal arms connected to the specimen together with gripping members fixed to its end (See Page 2, “General Features” paragraph, lines 1 – 20), the rigid members having load cells, a geared or electric motor

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with a speed reducer, a screw drive and a rotation determining means wherein the rotational movement is translated by the screw (See Page 3, the “Drive Unit” paragraph, lines 1 – 10, See Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Urumov according to the teachings of Boehler et al for the purpose of, advantageously providing a biaxial testing machine that allows for a nearly perfect implementation of off-axis tensile tests on sheet materials (See Boehler et al, Page 9, the “Conclusion”, paragraph 1, lines 1 – 4).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urumov and Boehler et al, as applied to claims 1 – 3 and 5 - 7 above, and further in view of Ramaswamy et al (6,247,370).

Regarding claim 4, Urumov and Boehler et al disclose all of the limitations of these claims except that the gripping jaws are located on a slide carriage that can travel along a linear dry bearing. However, Ramaswamy et al disclose a two-dimensional stress relaxation testing device comprising grippers 8 that are driven over a plurality of slideways 9 in a direction away from each other through a forearm linkage mechanism 10, wherein the arms displace the gripperslide in the horizontal plane (See Col. 4, lines 9 – 21).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Urumov and Boehler et al according to the teachings of Ramaswamy et al for the purpose of, simultaneously analyzing stress related behavior in two mutually perpendicular directions (See Ramaswamy et al, Col. 2, lines 37 – 40).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cavallaro et al (7,051,600) disclose a triaxial tension, compression and shear testing apparatus.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is (571)272-2176. The examiner can normally be reached on Mon-Fri 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OD/2855

2/28/08

/Michael Cygan/

Primary Examiner, Art Unit 2855